CHAPTER 1.0 PURPOSE AND NEED

This Environmental Assessment (EA) is being prepared as part of the National Environmental Policy Act of 1969 (NEPA) and is sponsored by the Idaho Transportation Department (ITD) and the Federal Highway Administration (FHWA).

This chapter presents the need for transportation improvements along US-93 between I-84 and SH-25, Jerome County, Idaho and the purpose of the proposed Project. It also describes the existing highway corridor, its role in the regional highway system, the problems with current and future roadway conditions, and what transportation improvements are needed to resolve the identified problems.

1.1 PROJECT LOCATION

The Project corridor is located in rural south-central Idaho as shown in Figure 1-1. The entire segment of the highway corridor is located in Jerome County, which is part of an eight-county region referred to as Magic Valley. US-93 is the primary north-south highway leading north from Twin Falls, on the south side of the Snake River Canyon. The southern limit of the US-93 corridor intersects with I-84 which provides access to Jerome City to the west. At the northern end of the Project, US-93 intersects with SH-25 which provides access to the county airport and Jerome City. US-93 continues north to the City of Shoshone.

Local roads that intersect US-93 within the Project limits include Crossroads Parkway[1], 400 South, 300 South, 200 South, 100 South, SH-25, and Butte Drive. In addition, the highway crosses over six canals/laterals as well as the Eastern Idaho Railroad (EIRR).

1.2 PROJECT STUDY AREA

The Project corridor is 6.1 miles long. The Projects southern terminus is at milepost 53.3 at the I-84/US-93 interchange; the northern terminus is at milepost 59.4, 3,500 feet north of the SH-25/US-93 intersection. For purposes of this EA and supporting documentation, a study area 650 feet wide (325 feet east and west of the US-93 centerline) was used. The study area is shown in Figure 1-2.

1.3 PROJECT PURPOSE AND NEED

1.3.1 Project Purpose

The purpose of this Project is to:

- Increase US-93 roadway capacity to accommodate existing and future year 2030 vehicle traffic; and
- Increase transportation safety for all users.

1 Crossroads Parkway provides access to a truck stop, motel, and the Idaho Farm and Ranch Museum. Crossroads Parkway (which connects to Centennial Spur) is under the jurisdiction of the Jerome Highway District.

1.3.2 Project Need

The need for this Project is based on the following factors:

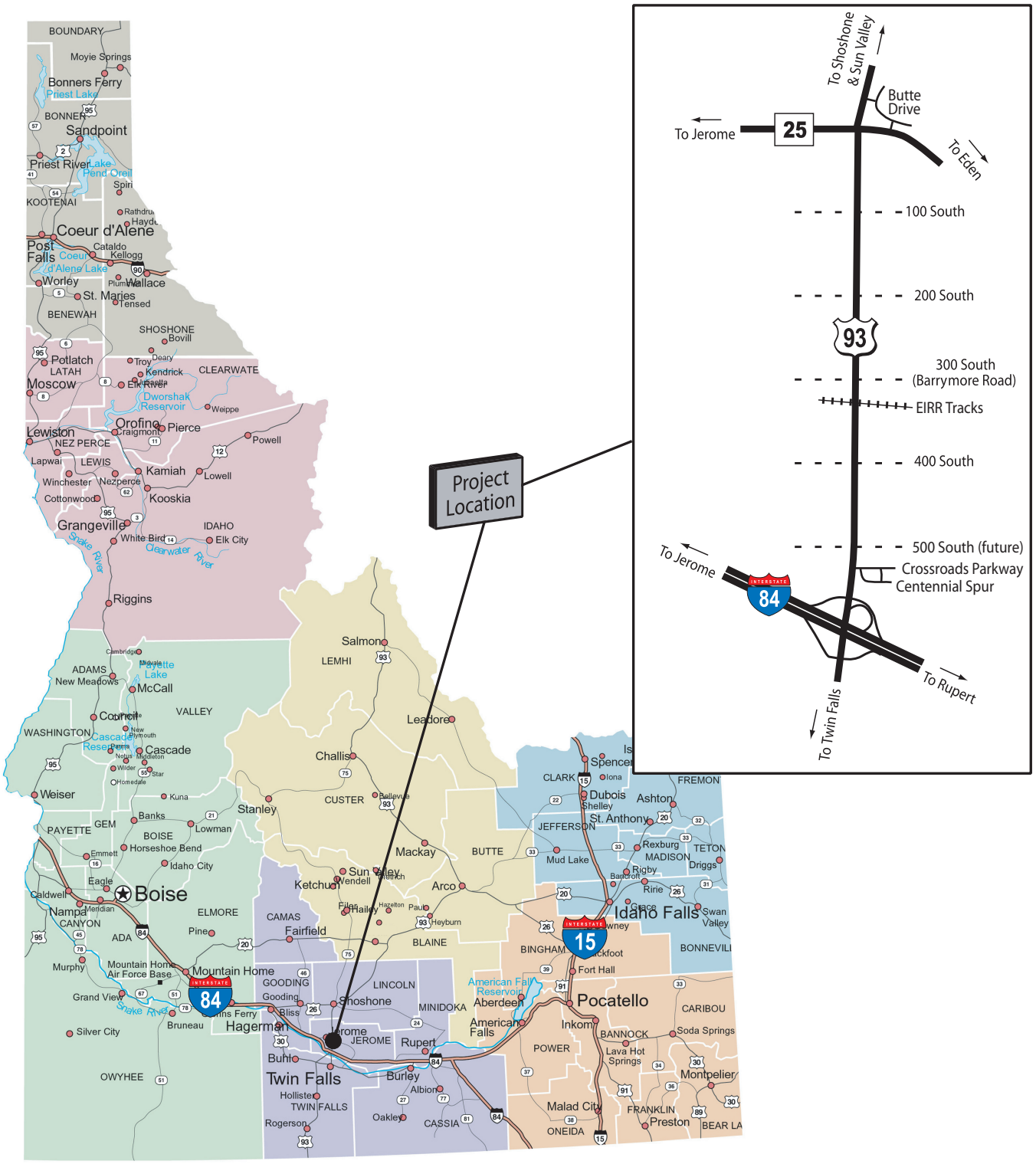
- Predicted 2030 peak hour traffic demand exceeds available transportation capacity;
- The US-93 Project corridor has been designated a Commercial Overlay Zone (COZ)[2] by Jerome County. The existing two lane facility will not accommodate the operations associated with future development;
- To provide a safe transportation facility for agricultural operations and residents until these properties develop as commercial facilities; and
- To accommodate a bicycle and pedestrian facility.

1.3.3 Project Objectives

Due to the anticipated problems caused by forecast traffic volumes and crashes, ITD proposes to make roadway improvements on US-93 between I-84 and SH-25. The objectives for these improvements include the following:

- Provide a transportation facility that meets current roadway standards and improves safety;
- Provide a transportation facility that accommodates projected traffic volumes;
- Provide a transportation facility that operates at acceptable level of service (LOS) and meets ITD standards;
- Provide a transportation facility that can accommodate access management concepts;
- Provide a safe railroad crossing that includes appropriate sight distance, signage, and signalization;
- Provide appropriate roadway design at intersections, access points, and hills;
- Provide acceleration and deceleration lanes and increase shoulder widths to accommodate slower and oversized vehicles for personal, commercial, and agricultural users; and
- Minimize potential impacts to the natural and built environment.

2 The Jerome County Comprehensive Plan states that the Commercial Overlay Zone is to "provide for and to encourage the grouping together of businesses, public and semi-public, and other related uses…and will be compatible to this highway corridor." Therefore, the major objective of the Commercial Overlay Zone is to spur economic development within the county and to help facilitate local transition from a largely rural, agricultural-based community to a more diversified economy.



No Scale for Idaho Map

Scale for Project Location Map

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Figure 1-1
Vicinity Map

LEGEND

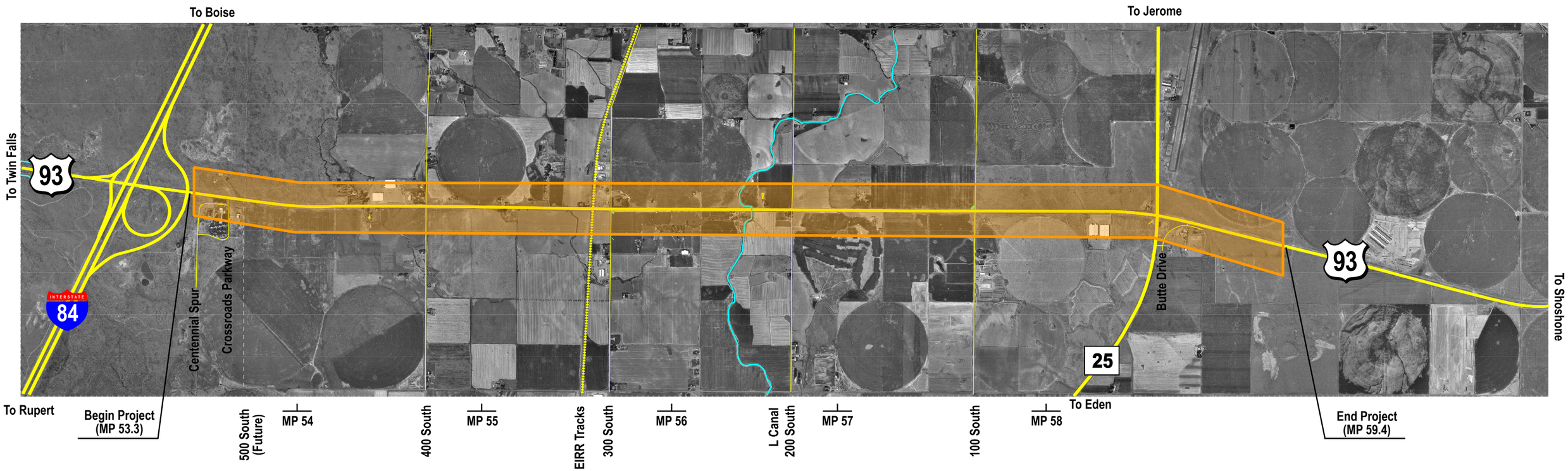

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Figure 1-2
Project Study Area

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Project Study Area

1.4 LOCAL, REGIONAL, AND STATEWIDE TRANSPORTATION PLANS

1.4.1 Statewide Long-Range Plan

Idaho's Transportation Future: Getting There Together (Idaho's Transportation Partners 2004) is a visionary plan that was developed in compliance with Title 23 of the United States Code, as amended by the Transportation Equity Act of 1998. The purpose of the planning effort was to involve the public and private sectors to envision a preferred statewide transportation system for the next 30 years. It was developed in cooperation with Idaho's metropolitan planning organizations and through consultation with non-metropolitan areas. The planning effort addresses all highway, public transportation, bicycle, pedestrian, water, air, information technology, and rail systems within the state of Idaho.

This plan examines the changing demographics of the population of Idaho and how this affects the demand for transportation services. The plan concludes that highway corridors will continue to be the core component of the surface transportation system; mobility will need to be increased by providing a broader variety of transportation modes. In addition, the plan acknowledges that the transport of freight on State highways will continue to be essential to the economic vitality of both Idaho and the Nation. It outlines principles to guide the development of the State's future transportation system. The plan does not address specific proposals to improve any one mode of transportation or component element of that mode and does not specifically discuss improvement for US-93.

1.4.2 Near-Term Statewide Implementation Program

The Idaho *Statewide Transportation Improvement Program* (STIP) (ITD 2005) outlines a five-year transportation planning and implementation program for specific projects. The projects include all modes of the State's transportation system – highway, public transportation, rail, bicycle, pedestrian, and air. The current plan lists projects for the period fiscal years 2006-2010 and was approved by both FHWA and the Federal Transit Administration in 2005.

In order to receive federal funding, each project must appear in the STIP. Each project is assigned a key number that is used to track the planning, design and construction of the project. Moreover, each project is specifically defined by route number, milepost, project description by type, the fiscal year the project construction is anticipated to begin, the estimated cost for planning, engineering, and construction; funding source, and agency responsible for development, maintenance and match funding for the project. The STIP includes two projects on US-93 between I-84 and SH-25. These projects are listed in Table 1-1.

TABLE 1-1. STIP PROJECTS LISTED FOR US-93 IN PROJECT AREA

Key	*Milepost*	*Project Name*	*Fiscal Year*	*Funding*	*Project Type*
09352	54.8-59.5	300 S. to SH-25	2007	$825,000	Pavement Rehabilitation
07801	56.7-59.5	200 S. to SH-25	Preliminary	$1,000,000	Major Widening

Source: ITD 2005.

1.4.3 Jerome County Comprehensive Plan

The Jerome County *Joint Agency Comprehensive Plan* adopted in November 1996 also addresses needed improvements for US-93. This plan was prepared as an integrated comprehensive update to existing city and county plans. It also includes plans for the region's public agencies, including Jerome County and the City of Jerome. The Transportation Plan in particular lists the following goal and objectives applicable to US-93:

1.4.3.1 Goal

Maintain and develop state and federal highways to provide sufficient access and ensure safety for all areas of the county.

1.4.3.2 Objectives

- Widen and/or construct US-93 to state/federal standards;
- Capitalize on the I-84/US-93 intersection's potential for development of commercial, distribution, technological, and tourism related services;
- Develop a cloverleaf at I-84 and US-93 that will maximize traffic movement, safety and to facilitate traffic movement between I-84 and US-93. The cloverleaf will be constructed in two stages. Stage I, completed in 2003, included the construction of a partial cloverleaf in the northeast quadrant.
- Stage I included:
  1) The construction of a loop ramp for the northbound vehicles on US-93 to westbound I-84 (see Figure 1-2);
  2) The relocation north of the I-84 westbound on- and off-ramps to provide enough room for the loop ramps;
  3) The replacement and widening of the north I-84 bridge over US-93 to provide additional room for traffic lanes and pedestrian pathway; and
  4) The addition of a free right turn ramp for US-93 northbound to I-84 eastbound traffic.
- Stage II will consist of:
  1) Widening US-93 to three through lanes beneath the I-84 bridges with a design speed of 50 mph;
  2) Reconstructing the eastbound I-84 bridge over US-93 to accommodate an additional lane, an auxiliary lane to maintain horizontal clearance requirements, and a pedestrian pathway;
  3) Reconstructing the I-84 eastbound on- and off-ramps to meet the higher grade established by the new I-84 bridges and to provide enough room for future loop ramps to be built between the ramps and I-84 (similar to the northeast quadrant built during Stage I);
  4) Reconstructing a portion of eastbound I-84 to accommodate the additional lane with a design speed of 75 mph; and
  5) Reconstructing traffic signals at the eastbound ramp intersection.
- Accommodate development along the US-93 corridor from I-84 to Sun Valley, including the US-93/SH-25 intersection (i.e. commercial/tourism related services and agricultural related industries);

- Construction of a truck/slow vehicle climbing lane on US-93 from 300 South northward to approximately ½ mile north of the SH-25 intersection; and
- Consider design standards and beautification Projects for main corridors, particularly US-93.

1.4.4 US-93 Needs Assessment

The US-93 Needs Assessment addresses the future transportation needs for US-93 from the I-84 interchange to Shoshone, a distance of 21 miles. This report evaluated safety concerns along the roadway, at intersections, and at the EIRR tracks. The plan also identified operational and capacity issues, access management, and shared use. The needs assessment included the development of five different alternatives with varying degrees of access control and median types, frontage road network system, and increasing traffic lanes from two to four. A planning level evaluation of the alternatives was completed.

The following are the recommendations:

- Increase safety at the EIRR crossing;
- Increase traveler safety by applying current ITD standards to the roadway;
- Improve existing and future traffic flow by adding adequate number of travel lanes and turn lanes;
- Provide adequate and safe accessibility for adjacent properties; and
- Provide the availability for a shared use highway (multi-use trail).

1.5 HIGHWAY SYSTEM ROLE AND LINKAGE

US-93 is a major north-south corridor in western United States traversing through four western states: Arizona, Nevada, Idaho, and Montana. Its southern terminus is in Arizona, 50 miles north of Phoenix at the junction of US-89/US-60; its northern terminus is at the U.S./Canadian border. As it passes through the western part of the Country, it connects with other major transportation corridors including US-89, US-95, US-60, US-6, US-20, US-50, US-30, US-26, I-40, I-15, I-80, I-84, and I-90. US-93 links major urbanized and commercial/industrial cities including Phoenix, Arizona (via US-60), Las Vegas/Henderson, Nevada, Twin Falls, Idaho, Missoula, and Kalispell, Montana.

1.5.1 Regional

US-93 serves the regions population centers of Twin Falls and Jerome cities. Twin Falls has a population of over 35,000 and is the largest urban area in south-central Idaho. People from the Magic Valley area both work and shop in the city. Jerome City is approximately ten miles north of Twin Falls and is the county seat for Jerome County. It has a total population of approximately 8,000. US-93 is a major link in both the local and highway network and serves local travelers. It connects to I-84 at the southern terminus of this Project. I-84 connects to Boise in western Idaho and Pocatello, via I-86, in eastern part of the state (see Figure 1-1). North of the Project study area in Shoshone, US-93 connects with SH-75, which travels north to the City of Ketchum, home of the famous Sun Valley Ski Resort. North of Shoshone, US-93 continues northeast through the Salmon River Mountains, Lost River Range, and Bitterroot Mountains to Missoula, Montana. South of Twin Falls, US-93 travels to Wells, Nevada and connects with I-80; one of the nation's major east-west highway corridors connecting major western population centers such as Salt Lake City, Reno, Sacramento, and San Francisco.

1.6 EXISTING ROADWAY CONFIGURATION AND CONDITIONS

To determine the existing problems on the US-93 Project corridor the existing roadway and traffic conditions were studied including traffic count data, evaluation of existing traffic and access controls, and examination of highway safety. The following paragraphs described the factors affecting existing highway conditions.

US-93 between milepost 53.3 and 59.4 is a rural highway with four lanes from the I-84 interchange to just north of Crossroads Parkway (i.e. access to the Flying J Truck Stop at approximately 500 South). The remainder of the highway is a two-lane road with turn lanes at intersections. At the southern end of the Project corridor, the speed limit is 45 mph to Crossroads Parkway, but increases to 55 mph.

The US-93 Project corridor is classified as a Principal Arterial by ITD. Principal Arterials are a class of roadways that emphasizes a high level of mobility for the through movement of traffic. Access is secondary to the primary function of the overall roadway and through traffic. Generally, travel speeds and distances between accesses and intersections are greater on these facilities compared to the other classes (minor arterial, collector, and local). The highest classes of arterials are interstates and freeways that have limited access to allow the free flow of traffic.

Existing local cross roads intersect the highway at-grade and include 400 South, 300 South, 200 South, and 100 South. Other roads that bisect US-93 include Crossroads Parkway on the south and Butte Drive on the north end of the Project (see Figure 1-1). SH-25 also intersects US-93 at-grade and provides access to the Jerome County Airport and Jerome City. A total of six canals, laterals or ditches (K Coulee Canal, L4A Lateral, L4 Lateral, L3 Lateral, L Canal, and D5 Ditch) cross under the highway within the Project corridor. Sections of the L4A, L4, and L3 Laterals are adjacent and parallel the highway. The EIRR tracks intersect the highway at-grade just south of 300 South. In addition, there are a number of driveways or accesses along the corridor that provide access to adjacent agricultural land, residences, and businesses (see Figures in Appendix A).

Right-of-way (ROW) widths vary from approximately 120 to 400 feet through the study area. The highway ROW is approximately 350 feet wide at the I-84 interchange and 400 feet at the SH-25 junction. The pavement width, including shoulders, ranges between 72 feet wide near the I-84 interchange to 34 feet wide through the majority of the corridor. However, the pavement widens from 34 feet to 46 feet at the 300 South intersection to allow for a left turn lane from US-93. Also, at the SH-25 intersection the pavement widens from 34 feet to 76 feet; this is to allow for a short segment of four travel lanes and a left turn lane from US-93. The pavement width transitions back to a 34 foot width near the northern terminus of this Project. The travel lanes are 12 feet wide with no median except at the southern end of the Project between I-84 and Crossroads Parkway and at the 300 South and SH-25 intersections. The roadway shoulders ranges between 5 and 10 feet wide. There are seven unsignalized intersections (Crossroads Parkway, 400 South, 300 South, 200 South, 100 South, SH-25 and Butte Drive). There is one traffic signal along the US-93 Project corridor located at the I-84 northbound on- and off-ramps.

The shoulders serve a dual purpose of accommodating bicycle and pedestrian traffic and enhancing the roadway for vehicular safety. According to Appendix B of the *Idaho Bicycle and Pedestrian Transportation Plan* (January 1995), roadway shoulders should be at least six feet wide to safely accommodate non-motorized traffic. Based on current conditions, the

corridor section between Crossroads Parkway and SH-25, generally does not meet ITD shoulder standards.

1.7 EXISTING ACCESS CONTROL, FUNCTIONAL CLASSIFICATION, AND EXISTING ROADWAY CONDITIONS

Access control refers to the techniques that can be used to control access to adjacent properties. ITD catalogs access management/control into five classifications. ITD has classified the existing US-93 in the Project corridor as a Type III access facility. Type III access control is for highways with a functional classification of Principal Arterial in rural areas with medium to high traffic volumes and high speeds.

The historic development of land uses (farms, rural residential, and businesses) along the highway corridor and the construction of local/County roads intersecting US-93 all pre-date current ITD highway standards for access control. These standards, as found in the State Highway Access Control policy (Administrative Policy A-12-01) recommend a minimum spacing distances between roadway intersections, approaches (i.e. driveways), traffic signals, and frontage roads. There are a number of accesses for agricultural properties, rural residences, as well as businesses. And a number of these approaches or accesses are less than the recommended 1,000 feet minimum spacing[3]. As such, the highway corridor does not meet ITD standards for approach spacing.

1.7.1 Intersection Analysis

As described above, only the I-84 interchange with US-93 is signalized and all of the existing local roads intersecting US-93 in the Project corridor are unsignalized (except at the I-84 northbound on- off ramps/US-93 intersection). The *Manual on Uniform Traffic Control Devices* (MUTCD), published by FHWA describes eight criteria, called "warrants". These warrants or standards are used to determine whether a traffic signal (or other increased type of traffic control) is needed to improve roadway operation and safety. Warrant numbers 2 and 3 evaluate the existing conditions of the highway corridor. Specifically, Warrant 2 examines the average hourly traffic volume during a four-hour peak period, also known as approach volume. If the approach volume exceeds the threshold for vehicles per hour a signal is "warranted" or recommended to improve safety and operation.

Warrant 3 examines the peak hour traffic volume. This standard simply evaluates the number of vehicles at the intersection for a one hour period. The analysis is based on highway peak hour volumes and is presented in Table 1-2 (found on the following page). Based on this analysis, only one location currently meets traffic signal warrant criteria. This location is at the Crossroads Parkway intersection.

3 Administrative Policy A-12-01, State Highway Access Control. 1,000 feet recommendation is found in table titled Approach/Intersection/Signal Spacing per Access Type on page 2.

TABLE 1-2. EXISTING SIGNAL WARRANT ANALYSIS

Intersection	*Peak Hour Approach Volume (major/minor)*	*Peak Hour Volume (minor)*	*Meets Warrant 2?*	*Meets Warrant 3?*
Crossroads Parkway	982/207	150	Yes	Yes
400 South	849/29	100	No	No
300 South	721/22	190	No	No
200 South	697/22	150	No	No
100 South	692/23	150	No data	No
SH-25	642/157	280	No	No

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006
Note: Major and minor are referring to the roadway configuration. For this analysis, the major roadway is US-93 and the minor roadways are the local intersecting roads.

Traffic counts were used to estimate existing volumes and turning movements at six unsignalized intersections along the US-93 corridor. This information is used to determine existing LOS at the unsignalized intersections based on the turning movement delay experienced by vehicles. Level of service (LOS) is a concept used by traffic engineers to measure how well a transportation facility operates. LOS ranges from A to F; ITD's guidance is LOS C for this type of roadway. A description of the different levels of service is included in the exhibit below.

Definitions of Level Of Service (LOS)

LOS	Roadway Segment Operating Characteristics	Visual Example
A	Represents free traffic flow, very few cars on roadway.	
B	In the range of free traffic flow, with some other motorists in the traffic stream begins to be noticeable. Some time spent following slower vehicles but appropriate gaps in traffic allows for passing with little delay.	
C	In the beginning range of traffic flow in which the operation of individual motorists becomes significantly affected by other motorists in the traffic stream. Time spent following slower vehicles is longer and occurs more frequently, but appropriate gaps in traffic allows for passing with moderate delay.	
D	Represents high-density traffic flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience. Time spent following slower vehicles is noticeably longer and occurs more frequently, and there are fewer gaps in traffic to allow for passing, increasing overall delay.	
E	Represents operating conditions at or above the capacity level. All speeds are reduced to a low and relatively uniform speed. Time spent following slower vehicles exceeds time not behind slower vehicles, and there are few if any gaps in traffic to allow for passing.	
F	Used to define intermittent stopping and moving at a very reduced speed. This condition exists wherever the amount of traffic exceeds the capacity of that point. Time spent following slower vehicles approaches 100 percent of the time traveling on a roadway segment, and there are likely no gaps in traffic to allow for passing.	

Source: Transportation Research Board, Highway Capacity Manual / (HCM) 2000, Pg. 10-5.

Typically, the longest delays are experienced by those from minor roads desiring to turn left onto the major roadway. The Highway Capacity Manual (2000) methodology was used to determine the LOS at each intersection. LOS at intersections is measured by seconds of delay. LOS criteria used is shown below in Table 1-3.

TABLE 1-3. LOS CRITERIA FOR INTERSECTION

Level of Service	*Average Control Delay (seconds/vehicle)*
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

Source: Highway Capacity Manual (2000), Exhibit 17-2

For this analysis, the LOS at an intersection is based on the delay for the approach roadway with the highest delay, and based on the average delay for each of the traffic movements on a single "leg" of the intersection. Table 1-4 shows the results of this analysis.

TABLE 1-4. EXISTING INTERSECTION LOS

Intersection	*LOS A.M. Peak Hour*	*LOS P.M. Peak Hour*
Crossroads Parkway	C	D
400 South	C	C
300 South	B	C
200 South	B	C
100 South	B	C
SH-25	B	C

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006

The ITD standard for unsignalized intersections is LOS C. Based on this information shown in Table 1-4, all intersections operate at an acceptable LOS (LOS C or better) during both peak hours with the exception of the Crossroads Parkway intersection.

1.7.2 Traffic Volumes

Traffic counts were taken to understand existing traffic conditions along the highway corridor, including the amount of traffic during peak hours as well as the number of trucks, cars, and other types of vehicles. Typically, morning and evening peak hour traffic counts are analyzed because the congestion associated with commute times represent the worst case traffic conditions. The existing two-way traffic volume on US-93 between I-84 and SH-25 is between 430 and 800 vehicles during the morning peak hour (9 to 10 a.m.), but increases between 670 and 1,100 vehicles during the evening peak hour (5 to 6 p.m.).

The measure of roadway conditions during peak hours is based on LOS. The LOS is graded on a scale of A through F. LOS A for rural, two-lane highways is uncongested, unrestricted, and very light traffic flows, while LOS F reflects queued lines of slow-moving traffic with no ability to pass slower moving vehicles due to heavy traffic in the opposite direction. Table 1-5, found on the following page, shows the existing LOS conditions for seven segments of the highway corridor.

TABLE 1-5. EXISTING CONDITIONS LOS

Roadway Segment	*LOS A.M. Peak Hour*	*LOS P.M. Peak Hour*
I-84 to Crossroads Parkway	A	A
Crossroads Parkway to 400 South	D	D
400 South to 300 South	C	D
300 South to 200 South	C	D
200 South to 100 South	C	D
100 South to SH-25	C	D
SH-25 to end of Project	C	C

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006

For rural state highways, ITD's LOS standard is C – a moderate level of traffic congestion. Based on the information in Table 1-5, the highway segment between Crossroads Parkway and 400 South has a LOS of D in the morning, below the ITD standard of LOS C. The other segments between Crossroads Parkway and SH-25 have LOS D during the evening peak hour.

1.7.3 Crash Analysis

Traffic studies also investigated existing safety on US-93 between I-84 and SH-25. The safety analysis examined the rate of vehicle crashes by type (angle, sideswipe, etc.), as well as severity (property damage, injury, fatality). This is typically measured in terms of crashes per 100 million vehicle miles traveled on a section of roadway. Crash rates that exceed the statewide average rate may indicate a recurring problem that needs to be corrected. Between January 1, 2001 and December 31, 2003, there were 55 crashes within the study corridor from a high of 22 in 2001 and a low of 12 in 2003. Table 1-6 shows the crash rates for the highway corridor segments.

TABLE 1-6. HIGHWAY SEGMENT CRASH RATES

Segment	*Length (miles)*	*Total Crashes*	*Fatal Crashes*	*Crash Rate*	*Fatal Crash Rate*
Crossroads Parkway to 400 South	1.71	16	0	128.0	0
400 South to 300 South	1.11	11	0	141.2	0
300 South to 200 South	0.98	8	0	127.1	0
200 South to 100 South	0.98	8	1	143.8	18.0
100 South to SH-25	1.62	12	2	134.0	22.3
Total	6.40	55	3	133.8	7.3

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006

The statewide average crash rate for the non-interstate state highway system for 2001-2003 was 182.1 crashes per 100 million vehicles miles of travel. All study segments have crash rates below the statewide average. The statewide average fatal crash rate for the same time period is 2.3. Two study segments have fatal crash rates that are above the statewide average:

- 200 South to 100 South; and
- 100 South to SH-25.

1.7.4 Pavement Conditions

Except for the very poor condition of pavement north and south of the railroad tracks near 300 South, the pavement condition in the study area is fair to good.

1.7.5 Eastern Idaho Railroad Crossing

ITD has developed a priority index used for improving railroad crossings. This index is based on roadway traffic, rail traffic, and the number of crashes at the crossing and accident potential over the next ten years. Based on this index (described in the *US-93 Needs Assessment*) the EIRR crossing needs to be improved.

1.7.6 Summary of Existing Roadway Conditions

- The Crossroads Parkway/US-93 intersection is the only location that currently warrants improvement for a traffic signal.
- All intersections operate at an acceptable LOS (LOS C or better) during both peak hours with the exception of the Crossroads Parkway intersection.
- The highway segment from Crossroads Parkway to 400 South does not meet the ITD standard for morning peak hour LOS. The segments between Crossroads Parkway and SH-25 do not meet the ITD standards for evening peak hour for LOS.
- There are two Project corridor segments with average fatal accident rate that are above the statewide average – 1) between 200 South and 100 South and 2) between 100 South and SH-25.
- The EIRR crossing needs upgrading based on ITD's crossing index.

1.8 FORECAST TRAFFIC PROBLEMS

To assess how the existing Project corridor will function in the future, a traffic analysis was prepared.

Future traffic volumes were projected for US-93 for the coming 30 years. As no travel demand forecasting model current exists for this segment of US-93, an alternative method was developed. This method considered existing and future land development, population and employment growth, and types of trip generation within the study area as well as the region. A trend analysis was used to forecast traffic volume increases based on past traffic volume increases. This forecast was then modified based on traffic increases specifically due to the proposed urban development in the US-93 COZ adopted by the Jerome County Commissionaires in 2000.

Traffic counts were taken and compiled for two segments of the Project corridor in 1998 and 2004; I-84 to Crossroads Parkway and 100 South to SH-25. Between I-84 and Crossroads Parkway, traffic volumes did not increase during this period. Traffic volumes, however, increased at a compound annual rate of 2.1 percent per year between 100 South and SH-25. The average growth rate for these two segments was 1.0 percent per year and is considered the background growth rate for traffic in the Project corridor.

Though historic increases in population and employment in Jerome County were associated with an economy based in agriculture, the historic trend analysis needed to be increased to accommodate planned urban development along the Project corridor and in the region. But because little land is zoned for urban development, the analysis assumed that an estimated 75 percent of future county employment growth will occur within the COZ along US-93. This employment growth was then used to forecast trip generation by land use type and density.

To analyze future traffic implications of not improving US-93, the forecast traffic volumes were modeled for the existing two-lane highway. Table 1-7 shows the existing and forecast

2030 peak traffic volumes for the Project corridor. Using this analysis, 2030 traffic volumes are expected to almost triple.

TABLE 1-7. COMPARISON BETWEEN CURRENT AND FORECAST TRAFFIC VOLUMES

US-93 Segment	*2004 AM Peak*	*2030 AM Peak*	*2004 PM Peak*	*2030 PM Peak*
I-84 to Crossroads Parkway	799	3,176	1,126	3,557
300 South – 200 South	481	2,029	691	2,283
100 South – SH-25	434	1,622	668	1,857
North of SH-25	375	997	554	1,213

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006

As with the study of existing travel conditions on the Project corridor, LOS was calculated for highway segments and intersections using the forecast traffic volumes. Table 1-8 shows these calculated LOS measures for both highway segments and intersections along the Project corridor.

TABLE 1-8. FORECAST LOS FOR HIGHWAY SEGMENTS & KEY INTERSECTIONS[1]

Segment	*2030 AM Peak*	*2030 PM Peak*
I-84 to 500 South (future)	C	C
500 South to 400 South	F	E
400 South to 300 South	E	E
300 South to 200 South	E	E
200 South to 100 South	E	E
100 South – SH-25	E	E
North of SH-25	D	D
Intersection:		
500 South [2]	F	F
400 South	F [3]	F
300 South	F	F
200 South	F	F
100 South	F	F
SH-25	F	F

Source: Traffic Analysis, Parsons Brinckerhoff, June 2006
Notes:
1. The ITD standard for LOS is C.
2. Assumes new 500 South Road built by developers.
3. Left turns from US-93 onto 400 South also cause US-93 to be LOS F for AM and PM Peak.

From the table, it is clear that without roadway improvements, none of the existing two-lane highway segments (north of Crossroads Parkway) will operate at acceptable levels. And forecast LOS of the existing intersections, all of which are currently unsignalized, will fail by 2030.

Moreover, with increased traffic volumes and decreased LOS, the incidence of vehicle crashes will increase. This is primarily because as traffic volumes increase, congestion and vehicle delay increases and drivers tend to become more anxious and are willing to accept small, sometimes unsafe gaps in traffic, when attempting to pass another vehicle or when turning onto the highway from a side road or driveway. Traffic crashes will also be expected to increase at the EIRR at-grade crossing due to increased exposure of blockages due to

train crossings. Fatal vehicle crashes, however, will likely stay the same or potentially decrease as they are typically attributable to excessive speeds, which will be less likely due to increased congestion.

Also, planned urban development of adjacent properties along the highway corridor will need access to either US-93 or local roads that intersect the highway. ITD, however, has standards that identify intersection, signal, and frontage road spacing and determine how at-grade access will be provided to future development located along the highway corridor. ITD classifies state highways by one of five types of access control. US-93 between I-84 and SH-25 is classified as a Principal Arterial because it is mostly a two-lane rural highway; therefore, it is a Type Class III access facility. In conclusion, forecast traffic volumes for US-93 without any changes to the existing roadway between I-84 and SH-25 will result in the following conditions:

- Traffic volumes will nearly triple between 2004 and 2030;
- LOS for all segments of the roadway that are currently only two lanes (north of the future 500 South) will be below ITD standards;
- LOS for existing and anticipated future intersections along the Project corridor will all be LOS F, substantially below ITD standards; and
- Traffic volumes and congestion will be expected to increase the incidence of vehicle crashes, including those with trains at the EIRR crossing.

1.9 ORGANIZATION OF THIS DOCUMENT

The remainder of this environmental document is comprised of four chapters. Chapter 2 presents the Project alternatives considered, why some of these alternatives were dropped from detailed evaluation, and describes in detail the proposed Project alternative. Chapter 3 evaluates potential direct, indirect, and cumulative environmental impacts (negative and beneficial) that could occur as a result of constructing the Project and mitigation measures, if applicable. Chapter 4 is the Section 4(f) Evaluation of potential impacts specifically to public recreational areas and historic resources. Chapter 5 summarizes the public outreach and involvement activities conducted as part of the Project planning and environmental review process. The last sections are a list of preparers, list of terms, and a list of references used to prepare this document.